

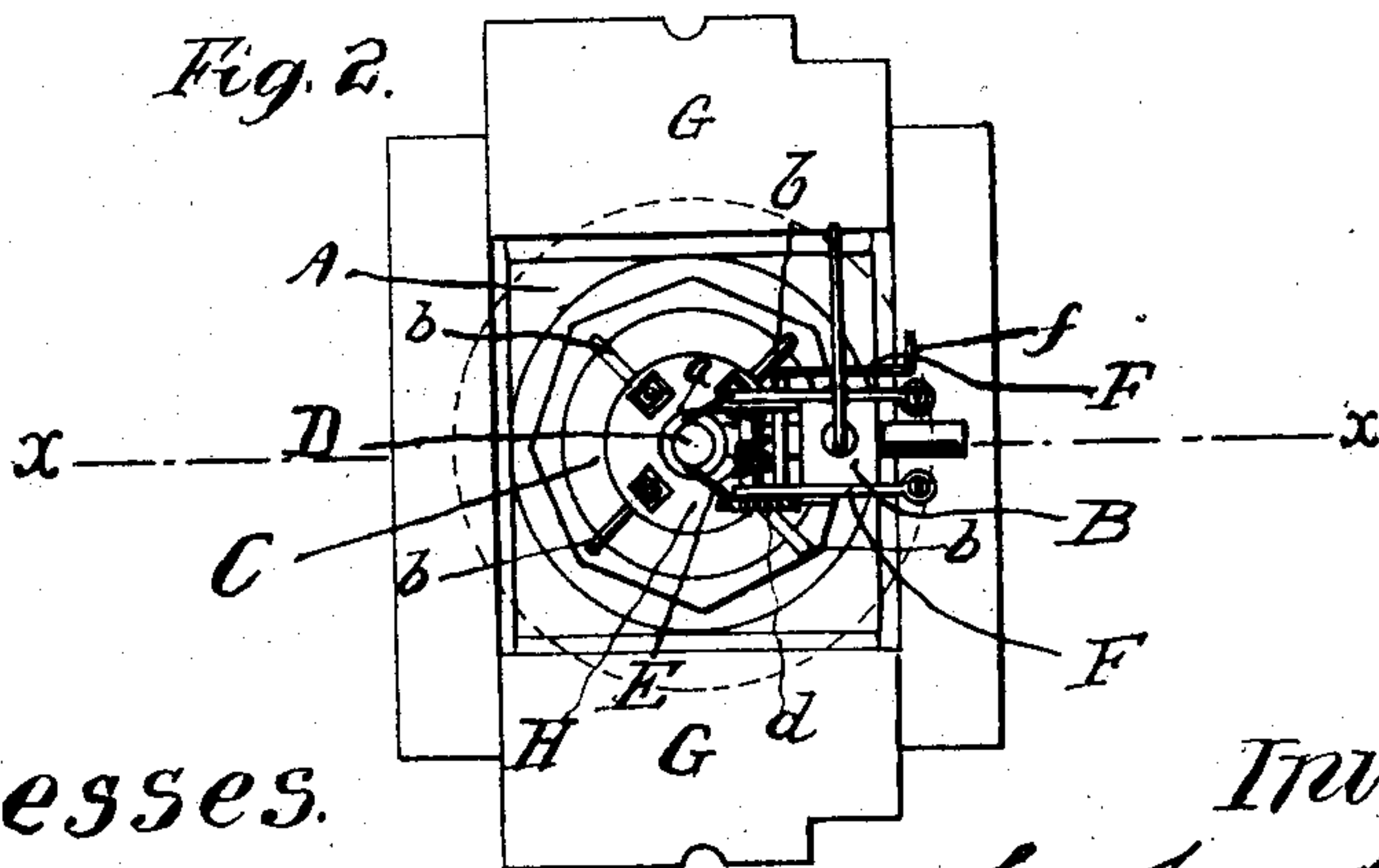
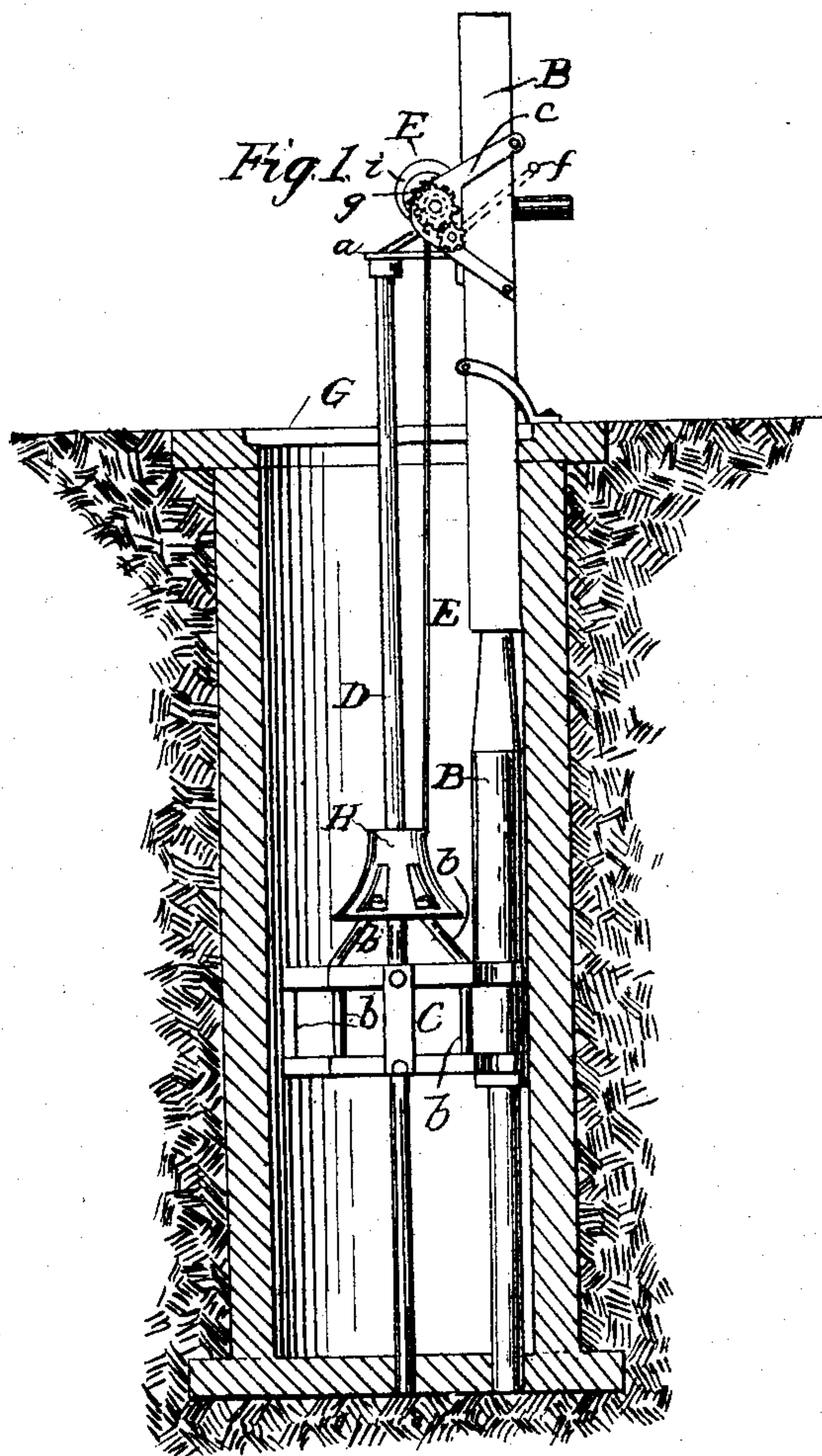
No. 93,452.

PATENTED AUG. 10, 1869.

J. J. KISER.

APPARATUS FOR UTILIZING WELLS AS REFRIGERATORS.

2 SHEETS—SHEET 1.



Witnesses.

Thos. Inoche
W. Jewin

Inventor.

J. J. Kiser
Per Munn & Co
Attorneys

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APPARATUS FOR UTILIZING WELLS AS REFRIGERATORS.

2 SHEETS—SHEET 2.

Figure 3.

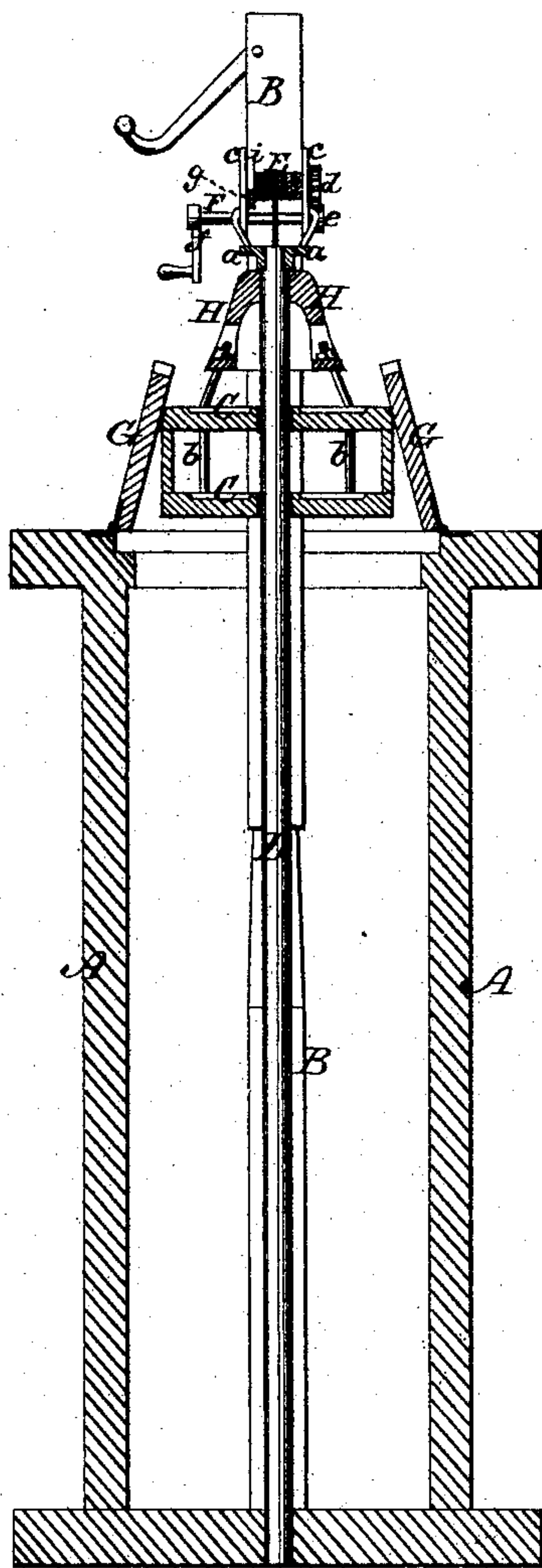
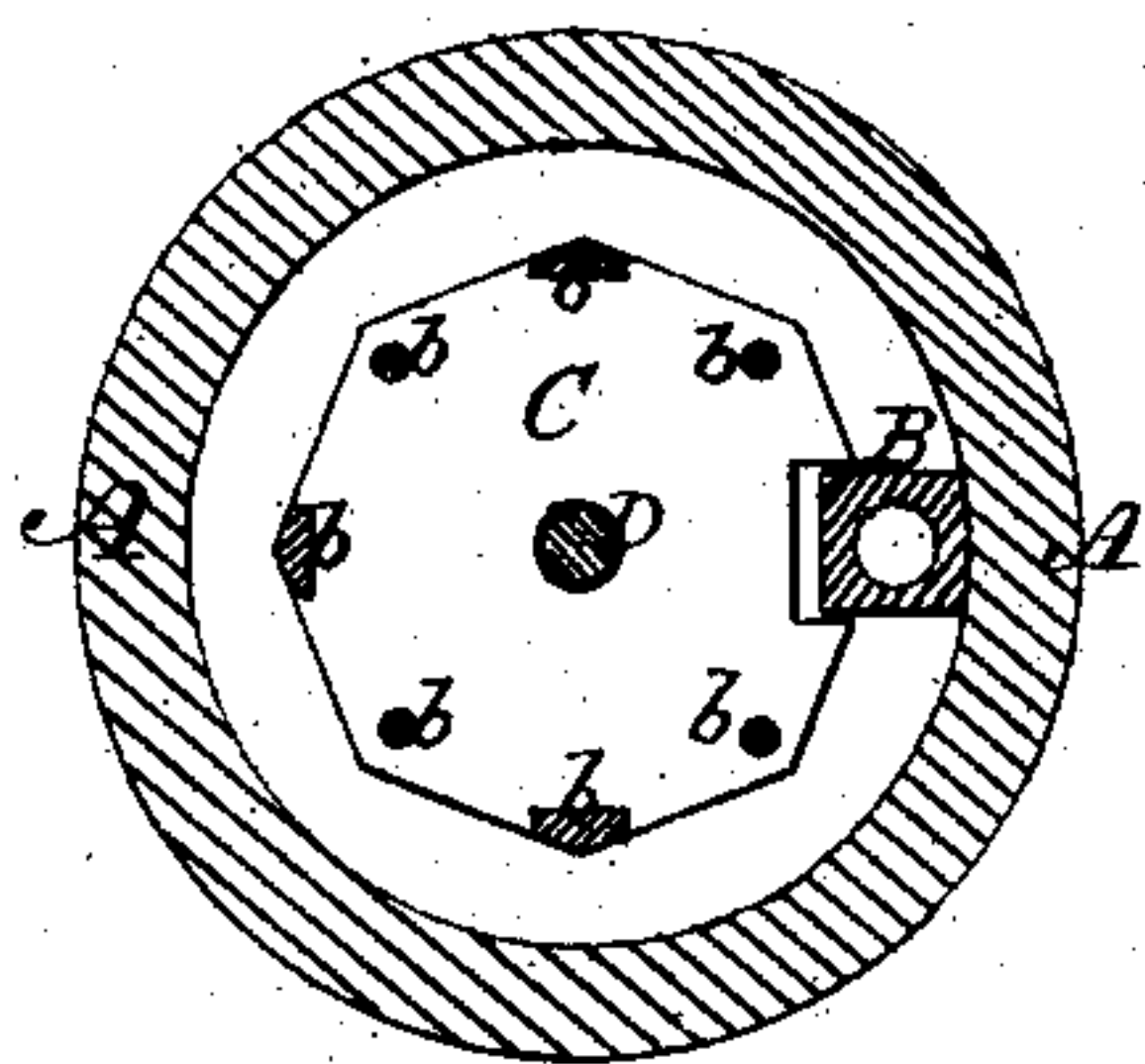


Figure 4.



Witnesses
Geo. W. Pearson.
Geo. R. Gray

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Jacob J. Kiser.
By his Attorneys,
Wofford & Johnson

United States Patent Office.

JACOB J. KISER, OF SULPHUR SPRINGS, INDIANA.

Letters Patent No. 93,452, dated August 10, 1869.

IMPROVEMENT IN APPARATUS FOR UTILIZING WELLS AS REFRIGERATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, JACOB J. KISER, of Sulphur Springs, in the county of Henry, and State of Indiana, have invented a new and useful Improvement called a "Well-Refrigerator;" and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings of the same, which make part of this specification, and in which—

Figure 1 represents a vertical section at the line x of fig. 2, of a well with its pump, showing the refrigerator-apparatus therein;

Figure 2 represents a plan or top view, the hinged covers of the well being open to expose the refrigerator-apparatus;

Figure 3 represents a vertical section, taken at right angles to that of fig. 1, showing the refrigerator-apparatus in the position it occupies, when opening the hinged covers of the well automatically, and sustaining them in an open position, to remove or deposit articles in the shelving; and

Figure 4 represents a horizontal section through the well and refrigerator-apparatus, particularly showing the pump in connection with and serving as a guide for the receiving-shelving.

My invention relates to a device for utilizing the ordinary well, so as to convert it into a refrigerator, wherein may be kept, for preservation during the summer season, meats, vegetables, milk, and other articles; and

It consists in arranging a suspended shelving for the reception of the articles to be preserved upon a vertical fixed central guide, in such manner that the ascent of the shelving above the top of the well will automatically open and retain in that position the hinged covers of the well, for the purpose of removing and placing upon the shelves such articles as may be desired, while the descent of the shelves will automatically close the hinged covers, thus relieving the attendant from the necessity of opening and closing the well, in getting access to the articles kept therein. Also, in connecting the pump within the well to the shelving, so as to form a guide to prevent the shelving from turning horizontally while being raised and lowered, and by which the pump is made to perform the several functions of a support for the fixed guide-rod, a stop to limit the ascent of the shelving, and a support for the windlass, so that a refrigerator is obtained above the surface of the water in a well, where articles may be at all times kept perfectly cool and pure without the use of ice, and obtained therefrom with as much facility as from an ordinary refrigerator, and with far less expense.

In the accompanying drawings—

A represents the walls of a well;

G, the hinged covers; and

B, the pump, which is arranged against the wall instead of in the centre of the well, as heretofore.

This location of the pump is necessary, in order to leave the centre of the well free to receive the shelving.

A fixed vertical guide-rod, D, is secured within the centre of the well, and extends above the top thereof a sufficient distance to allow the shelving arranged thereon to be elevated above the top of the wall.

The pump also extends above the well a sufficient distance to carry suitable gearing for raising and lowering the shelving of the well, and to form an attachment thereto of the projecting end of the central guide-rod D, which is made by a horizontal cap-plate, a , which, while it maintains the vertical guide D in its fixed position, also serves as a stop to limit the ascent of the shelving above the well, as shown in fig. 3.

The shelving consists of two or more horizontal shelves C, of circular or polygonal shape, and of a diameter less than that of the well, so as to allow them to rise and descend freely therein.

They are connected together by vertical rods b , so as to leave their sides entirely open to obtain access to the space between them, which must be sufficient to admit milk crocks and other articles to be placed thereon.

Directly above these shelves C, and connected thereto by rods, I secure a conical-shaped hood, H, of less diameter than the shelves, for the purpose of serving the three several purposes of a cover to the upper shelf, a guide to steady the ascent and descent of the shelving, and to lift and maintain the hinged covers in an open position by the ascent of the shelving, as will be presently described.

The shelves C and the conical hood H are each provided with a central opening, through which the vertical fixed guide-rod D passes, and thus constitute a triple guide to said shelves.

The shelves, thus arranged and constructed, are suspended to the windlass by means of a strong rope or chain, E, which is of a length sufficient to allow the shelving to descend into the well just above the water.

The windlass F is located directly above the arresting cap-plate a of the central guide, and consists of a short horizontal hub or roller, to which the hoisting-rope E is attached, and it is secured by two side plates c to the pump.

The windlass-roller carries on one end a pinion, d , which matches into a smaller pinion, e , on the end of a short shaft, whose other end is fitted with a crank-handle, f , by which the windlass is turned.

The windlass-roller is also fitted with a ratchet-wheel, g , into which engages a ratchet-pawl, i , for holding the windlass when the shelving is elevated, thus not only using the pump as a guide to the shelving and a support to the central guide-rod, but as a means of main-

taining the shelving above the top of the well. The pump, therefore, while being common to all wells, serves three important functions in connection with my well-refrigerator.

The cover consists of two equal parts G, hinged to suitable floorings, at opposite sides of the top of the well, so that when closed, the central joint fits snugly around the central fixed guide D, so as to form a closed top to the well.

In order that one and the same attendant may open and close the well, while at the same time raising the shelving from or lowering it into the well, I have arranged the conical hood H above the shelving, so that as the latter ascends, the hood will come in contact with the under sides of the two equal halves of the cover, and lift and open them, and in this connection I also arrange the cap-plate *a* of the central fixed guide-rod D, so as to form a stop to arrest the ascent of the shelving at a point just suited to hold the equal halves of the cover open, but in a position inclining toward each other, so that when the shelving is unlocked from the windlass, and again descends into the well, the covers will also descend by their weight, and thus automatically close the top of the well, leaving the attendant free to raise and lower the shelving without having also to open and close the well.

When the shelving is elevated above the top of the well, they are sufficiently exposed to convenient access to remove and replace articles therein, and such an arrangement, in connection with a well, is perfectly adapted to keep any article from spoiling by warm weather, as they are kept just above the surface of a cistern of pure cold water, and within a closed, cool

well. In like manner articles may be kept, in the winter season, from freezing, as an enclosed well will then serve as a warm chamber, and especially adapted to prevent eggs and milk from freezing, and as milk, when frozen, will yield no cream, a warm well-cellar is especially adapted for this purpose, and imparts to this invention an additional usefulness in all seasons of the year.

Having described my invention,

I claim—

1. The arrangement of the pump, in connection with a well-refrigerator, in such a manner that the pump will serve the purpose of a guide to the shelving C, a support to the central fixed guide-rod D, a support for the windlass F, and a stop to arrest the ascent of the shelving, substantially as before described.

2. The conical hood H of the shelving, constructed and arranged in such manner that the ascent of the shelving will open the hinged covers G of the well automatically, and maintain them in a position to be closed automatically by the descent of the shelving, substantially as before described.

3. The pump B, located as described, in combination with the refrigerator-shelving C, the conical-opening hood H, the stop *a*, to limit the ascent of the shelving, and the windlass F, for raising and lowering the shelving into the well, arranged and constructed substantially as before described.

JACOB J. KISER.

Witnesses:

J. H. THOMPSON,

J. B. BENBOW.